
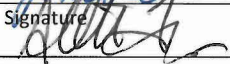
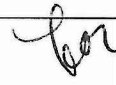



U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 2
PESTICIDES AND TOXIC SUBSTANCES BRANCH
2890 Woodbridge Avenue Edison, New Jersey 08837

INSPECTION REPORT

Report Date*:	NOV 15 2019		
Inspection Date(s):	10/22/2019		
Type of Inspection: (Check all that apply)	<input checked="" type="checkbox"/> On-Site <input type="checkbox"/> Off-Site (Records Review)	<input checked="" type="checkbox"/> Late/Non-Reporter <input type="checkbox"/> Data Quality	
Statute:	EMERGENCY PLANNING & COMMUNITY RIGHT-TO-KNOW ACT (EPCRA) SECTION 313		
Regulatory Program(s):	TOXICS RELEASE INVENTORY (TRI)		
FACILITY INFORMATION			
Facility Name:	Curtis Instruments, Inc.		
Facility Phone, Main:	(787) 757-9060		
Facility Address:	Sabana Abajo Industrial Park, Cuatro Ruedas St., Lot #6		
City, State, Zip:	Carolina, PR 00983		
County:	N/A		
Facility Participant(s):	Name: Alberto Alvarado	Title: VP & General Manager	
	Email: alvaradoa@curtisinst.com	Phone: (787) 757-9060	
	Name: Jose Melendez	Title: EHS/Facility Supervisor	
	Email: melendezj@curtisinst.com	Phone: (787) 757-9083	
	Name: Jose Hernandez	Title: Mfg Engineering & Maintenance Manager	
	Email: hernandezj@curtisinst.com	Phone: (787) 757-9083	
Primary NAICS Code:	334418 – Printed Circuit Assembly (electronic assembly) Manufacturing		
Primary SIC Code:	3679 – Electronic Components		
TRI Facility ID:	0098WCRTSNCUATR		
FRS Number:	110070070549		
Dun & Bradstreet:	174054528		
State of Incorporation/Year:	Puerto Rico/1986		
Employee Count:	325		
Gross Annual Sales:	>\$10 M		
INSPECTION PERSONNEL			
James Crossmon	TRI Coordinator	Signature 	Date 11/14/2019
Alberto Larotonda	Inspector-In-Training	Signature 	Date 11/14/2019
REPORT APPROVAL			
John Gorman 	Chief, Pesticides & Toxic Substances Compliance Branch	Signature 	Date 11/15/19

* The effective date of this report shall be the date of signature by the approving official or his/her designee.

SECTION I – INTRODUCTION

PURPOSE OF THE INSPECTION:

The purpose of this inspection was to determine regulatory compliance with Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA), codified at 40 CFR Part 372, also known as the Toxics Release Inventory (TRI) requirements. The inspection sought to determine if the facility manufactured, processed, or otherwise used any listed TRI chemicals above reportable thresholds, and whether they should have filed TRI Form A or Form R reports.

This facility was selected for inspection because records suggested that it met the three TRI reporting criteria of: operations described by a TRI-regulated North American Industry Classification System (NAICS) code; an employee equivalency count exceeding 20,000 annual hours; and, activities involving TRI-regulated chemicals. Pre-inspection research indicated that the facility had reported to TRI for Lead for reporting years 2016, 2017, and 2018. No other reports were found for other chemicals or reporting years.

OPENING CONFERENCE:

The inspectors presented their credentials and explained the purpose of their visit. Business cards were exchanged. The inspectors presented and explained the inspection forms. The Notice of Inspection was processed and the facility retained a copy for their records (Attachment 1).

SECTION II – DATA COLLECTION, STATEMENTS, AND OBSERVATIONS

FACILITY BACKGROUND INFORMATION:

The Curtis Instruments, Inc. (Curtis) facility in Carolina, PR assembles electronic circuit boards for various customers (other companies), primarily for motor controllers, pump controllers, and the like.

DISCUSSION:

Alberto Alvarado (Vice President & General Manager), Jose Melendez (Safety/Facility Supervisor), and Jose Hernandez (Mechanical Engineering & Maintenance Manager), represented the facility at the inspection. The interview discussion included the general background of the facility, as well as items on the TRI questionnaire response document. The questionnaire and supporting documents are discussed in more depth in later sections of this report. As an introduction, the facility representatives summarized the operation thusly: Curtis buys bare boards (empty circuit board material), they “stuff” the board with electronic components, attach connectors, and then the assemblies are integrated into a “black box.” A black box is an enclosure, usually made of metal or plastic, designed to protect the electronics and provide for mounting it to another structure. Curtis ships the black boxes to their customers, who install them in their own products.

DOCUMENT REVIEW:

The facility representatives presented the inspectors with a physical binder containing their TRI questionnaire response document and supporting materials. These are the binder contents, and a summary of the discussions for each part:

- Questionnaire response document (Attachment 2) – notable items
 - Description of raw materials used: “Electronic components such as Resistors, Capacitors, LEDs, FETs, Inductors, Transistors, Sensors, Integrated Circuits, Connectors, Ferrite Cores and Printed Circuit Boards to build Printed Circuit Assembly. These are integrated using PB/SN solder such as Solder Paste, Solder Bars, and Flux. Controllers are built using base plates made of aluminum, screws, clips, copper bars coated with aluminum, spacers, washers, insulators, Bus Bar made of Copper or Alu alloy coated with Tin, Cover made of Polymer Resin.”
 - List of chemicals used to treat wastes/wastewater and quantities for the above referenced years (if applicable): “Not applicable – Curtis does not treat wastes/wastewater on site.”
- Aerial photo, schematic site diagram, manufacturing area layout & process flowchart (Attachment 3)
 - General process steps/areas of the production floor:
 - Surface mount technology
 - Through hole assembly
 - Wave solder process
 - Secondary operation
 - In-circuit test & inspection
 - Final controller manual/automated assembly
 - Shipping
- Raw materials annual usage & 2019 Safety Data Sheet (SDS) Master List (Attachment 4)
 - Spreadsheet of raw materials Curtis purchases, the vendor, manufacturer, SDS number, etc.
 - Spreadsheet Curtis uses to calculate TRI chemical thresholds, more details below in narrative section of report
- Curtis product offerings (catalog items) (Attachment 5)
 - This section was briefly reviewed to familiarize the inspectors with Curtis products.
- Waste management information (Attachment 6)
 - Non-hazardous wastes such as paper, plastic, and cardboard are collected by a vendor for recycling.
 - Lead is recycled on-site for reuse.
 - Lead is also transferred off-site for recycling.
 - More on production wastes is described in the narrative section below.
- EPCRA submissions for reporting years (RY) 2016, 2017, and 2018, including associated SDSs, site diagram, and other reference documents (Attachment 7)
 - The Tier 2 submittals listed: Diesel Fuel (emergency power generator and fire pumps), Lead (manufacturing material and industrial batteries), and Sulfuric Acid (Lead/Acid batteries).
 - The TRI Form R submittals for Lead for reporting years 2016, 2017, and 2018 were reviewed.

- Chemical substances control procedure – an internal document to instruct employees of their responsibilities related to EPCRA regulated chemicals (Attachment 8)
 - The document was authored by Jose Melendez (present at the inspection), is dated 2013, and demonstrates a familiarity with EPCRA.
- Environmental permits (Attachment 9)
 - Air, water, stormwater, RCRA Subtitle C documents were briefly reviewed.
- Pollution reduction devices (Attachment 10)
 - Two solder recovery machines, one for Leaded solder and one for non-Lead solder
 - An evaporator to reduce the volume of wastewater which contains traces of Lead
- Non-Hazardous & Hazardous waste disposal logs for 2016, 2017, 2018, and 2019 (Attachment 11)

The inspectors requested the SDS for the flux material used during the soldering process, and the facility provided a copy for the product “Loctite MF R301 5L/MFR301 Liquid Flux” (Attachment 12). According to the SDS the product does not contain any TRI chemicals above de minimis.

TRI chemical activity thresholds are determined using inventory tracking software called “Syteline” and comparing purchase reports to the TRI chemical constituents of the raw materials SDSs to sum the annual pounds of any TRI chemicals. This can be seen in more detail by referring to Attachment 4.

The on-site air releases reported for Lead are generated by wave soldering, and by process ovens. Off-site transfers of Lead wastes are sent to receiving facilities as noted on the facility’s Form R submittals. Based on the facility’s characterization of their activities, aside from Lead, no other TRI chemicals/chemical categories appear to have been used above applicable TRI activity thresholds.

In addition to the waste management activities already described above (contained in the response binder documents), Hazardous wastes include: rags contaminated with Lead, waste Isopropanol, Lead-contaminated scrap, pump filters, water with traces of Lead, and expired materials in Lab Packs. Defective circuit boards are shipped to a recycling company in New Jersey.

Sanitary water and process water are received from the local water authority. Electricity is from the local power authority. When asked about the presence and age of any power transformers on-site, the facility representatives stated that all of their indoors transformers are the “dry-type.” They also provided photos of three electrical substation transformer ID plates, which presumably are different transformers than the indoor transformers that were described as dry-type” because two of these ID plates describe oil contents, though the manufacture dates appear to be post-1980 and therefore non-PCB oil (Attachment 13).

The facility representatives provided a copy of a November 2017 email from EPA Headquarters to Jose Melendez, questioning the parent company name that the facility uses for their submittals (Attachment 14). The inspectors retained a copy in the event that the matter becomes relevant to the EPA Region 2 office involved with this particular inspection.

FACILITY TOUR:

The facility representatives led the inspectors on a tour, further explained the operation, and answered questions.

SECTION III – CLOSING CONFERENCE

The Receipt for Samples and Documents form was processed and the facility retained a copy for their records (Attachment 15). Due to the size and weight of the facility's response documents, it was agreed that they would ship them to Crossmon's office in Edison, NJ.

SECTION IV – FOLLOW-UP

On 10/24/2019 a package arrived at EPA's Edison, NJ office for Crossmon containing the binder that was reviewed at the inspection.

SECTION V – LIST OF ATTACHMENTS

1. EPA Notice of Inspection
2. TRI questionnaire response
3. Aerial photo, schematic site diagram, manufacturing area layout & process flowchart
4. Raw materials annual usage & Safety Data Sheet (SDS) Master List
5. Curtis product offerings (catalog items)
6. Waste management information
7. EPCRA submissions - RY2016, 2017, and 2018, and supporting documents
8. Chemical substances control procedure
9. Environmental permits
10. Pollution reduction devices
11. Non-Hazardous & Hazardous waste disposal logs for 2016, 2017, 2018, and 2019
12. Safety Data Sheet for Loctite MF R301 5L/MFR301 Liquid Flux
13. Photos of electrical substation transformer ID plates
14. Parent company name email from EPA Headquarters
15. Receipt for Samples and Documents